

Listing of the Claims:

The following is a complete listing of all the claims in the application, with an indication of the status of each:

1 to 7 (Canceled).

- 1 8. A computer implemented best indicator adaptive (BIA) method for demand
2 forecasting comprising the steps of:
3 implementing a plurality of forecasting subsystems which make use of
4 indicators Load (L), Ship (S) and Customer Acceptances (CA) history (CA_{hist});
5 generating a forecast (CA_L) from Load (L) by modeling the ratio of
6 quarter-to-date load to quarter CA actual as a random variable with gamma
7 distribution so that the CA becomes a variable with generalized gamma
8 distribution and computing the sample mean and sigma of the Load-to-CA
9 ratio for a final forecasted CA_L demand;
10 generating a forecast (CA_S) from Ship (S) by modeling the ratio of
11 quarter-to-date ship to quarter CA actual as a random variable with gamma
12 distribution so that the CA becomes a variable with generalized gamma
13 distribution and computing the sample mean and sigma of the Ship-to-CA
14 ratio for a final forecasted CA_S demand;
15 generating a forecast (CA_{LS}) from Load and Ship (LS) by forecasting
16 Customer Acceptances (CA) based on Load (L), Ship (S) and Customer
17 Acceptances history (CA_{hist}) to generate CA_{LS} by estimating the functional
18 relationship and the parameters relating the two ratios Load-to-CA and Ship-
19 to-CA;
20 generating a forecast from Customer Acceptances history (CA_{hist});
21 refining the forecasts based on distribution demand using Customer
22 Requested Date (CRAD) by
23 generating a forecast from Load (L) and CRAD as $CA_{L,CRAD}$,
24 generating a forecast from Ship (S) and CRAD as $CA_{S,CRAD}$, and

25 generating a forecast from Load (L) and Ship (S) and CRAD as
 26 $CA_{LS,CRAD}$;
 27 for each forecast CA_L , CA_S , CA_{LS} , $CA_{L,CRAD}$, $CA_{S,CRAD}$, $CA_{LS,CRAD}$, and
 28 CA_{hist} , determining a forecast error;
 29 eliminating CA_{LS} and $CA_{LS,CRAD}$ if data is for a historical period shorter
 30 than a predetermined period;
 31 for all remaining forecasts, selecting the forecast having the smallest
 32 error; and
 33 outputting the selected forecast as an optimum forecast.

1 9. A computer implemented best indicator adaptive (BIA) method for demand
 2 forecasting comprising the steps of:
 3 inputting Load (L), Ship (S) and Customer Acceptances (CA) quarterly
 4 history (CA_{hist}) data;
 5 implementing a plurality of forecasting subsystems making use of four
 6 sources of information, Load (L), Ship (S), Customer Acceptances quarterly
 7 history (CA_{hist}), and Customer Request Date (CRAD);
 8 forecasting Customer Acceptances (CA) based on Load (L) to generate
 9 CA_L by modeling a ratio of quarter-to-date load to quarter CA actual as a
 10 random variable with gamma distribution so that the CA becomes a variable
 11 with generalized gamma distribution whose mean and sigma can be easily
 12 computed from the sample mean and sigma of the Load-to-CA ratio;
 13 forecasting Customer Acceptances (CA) based on Ship (S) to generate
 14 CA_S by modeling the ratio of quarter-to-date ship to quarter CA actual as a
 15 random variable with gamma distribution so that the CA becomes a variable
 16 with generalized gamma distribution whose mean and sigma can be easily
 17 computed from the sample mean and sigma of the Ship-to-CA ratio;
 18 forecasting Customer Acceptances (CA) based on Load (L), Ship (S)
 19 and Customer Acceptances history (CA_{hist}) to generate CA_{LS} by estimating the
 20 functional relationship and the parameters relating the two ratios Load-to-CA

21 and Ship-to-CA;
22 using a log mean to sigma ratio of CRAD distribution, adjusting the
23 forecasts CA_L , CA_S and CA_{LS} to arrive at more accurate forecasts $CA_{L,CRAD}$,
24 $CA_{S,CRAD}$, and $CA_{LS,CRAD}$;
25 for each forecast CA_L , CA_S , CA_{LS} , $CA_{L,CRAD}$, $CA_{S,CRAD}$, $CA_{LS,CRAD}$, and
26 CA_{hist} , determining a forecast error;
27 eliminating CA_{LS} and $CA_{LS,CRAD}$ if data is for a historical period shorter
28 than a predetermined period;
29 eliminating any other forecast due to expert knowledge;
30 for all remaining forecasts, selecting the forecast having the smallest
31 error; and
32 outputting the selected forecast as the final optimum forecast.